



Logistics outsourcing performance and loyalty behavior

Comparisons between Germany and the United States

Logistics
outsourcing
performance

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Abstract

Purpose – The purpose of this paper is to examine how goal achievement and goal exceedance influence the aspects of loyalty in logistics outsourcing relationships. Specifically, it aims to develop and test a model of customer loyalty across two cultures to determine if dedicated strategies for building loyalty are required.

Design/methodology/approach – This effort develops a conceptual model that provides a better understanding of the relationship between two dimensions of logistics outsourcing performance (goal achievement and goal exceedance) to loyalty across cultures. The model is then tested using structural equation modeling along with multi-group analysis.

Findings – The findings indicate that goal achievement strongly influences the loyalty aspects of retention and referrals, but not extension. Meanwhile, all three dimensions of loyalty were influenced by goal exceedance of the logistics provider. Further, goal achievement was found to have a stronger effect on retention only, with goal exceedance demonstrating a stronger influence on extension and referrals. In addition, cultural differences in the model were identified.

Research limitations/implications – Future research should examine more transactional settings as well as other potential moderators that may be consequential to the examination of loyalty formation.

Practical implications – The findings suggest that logistics service providers (LSPs) need to have an appreciation for the differences between goal achievement and goal exceedance as it relates to loyalty formation. In addition, LSPs need to adapt their performance goals based on cultural differences that may exist across their markets.

Originality/value – The close examination of the two dimensions of outsourcing performance on three aspects of loyalty behavior builds on the extant literature. The examination across the two national settings provides yet another contribution of the study.

Keywords Outsourcing, Customer loyalty, Supply chain management, Germany, Targets, United States of America

Paper type Research paper



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1. Introduction

The study of customer loyalty remains among the most substantial and debated areas of business research in recent decades. Driven by the belief that maintaining existing customers and extending business with them is significantly less expensive than acquiring new customers and leads to greater profitability (Kalwani and Narayandas, 1995; Zeit-haml, 2000), managers at companies operating in competitive global markets have identified the need to strive for a loyal customer base (Stone *et al.*, 1996). Since “a loyal customer base represents a barrier to entry, a basis for a price premium, time to respond to competitor innovations, and a bulwark against deleterious price competition” (Aaker, 1996, p. 106), managers at logistics service providers (LSPs) need to understand how to nurture loyalty in the relationships with their customers.

Despite the increasingly common adoption of logistics outsourcing around the world (Langley and Capgemini, 2009), much remains unknown about the means by which a provider and a user of logistics services maximize the respective and mutual benefits of the business relationship. Some research has begun to identify user concerns about satisfaction and performance issues with their LSPs (Lieb and Bentz, 2005; Maloni and Carter, 2006; Langley and Capgemini, 2009). In particular, many users continue to report problems with their LSP's ability to meet service level commitments and their lack of continuous, ongoing improvements in offerings (Langley and Capgemini, 2009). In fact, these two issues have consistently been the most mentioned areas for needed improvement by users of LSPs over the past years in a global study of the industry (Langley *et al.*, 2006; Langley and Capgemini, 2009).

At the same time, many managers of LSPs question whether or not customers are willing to reward excellent performance and remunerate the exceedance of their expectations. Thus, the challenge for LSPs in this respect lies in optimizing the performance in each customer relationship to balance the necessary resources required to deliver value to the customer and the benefits that follow from this performance to the LSP. This refers to the question as to what level of performance should be targeted by service providers and at which level performance improvements are most effective (Yap and Sweeney, 2007) – whether it is sufficient just to meet customer expectations or whether exceeding them yields a substantial increase in customer loyalty.

Literature on customer delight posits that unexpectedly good services offer the potential to greatly enhance customer loyalty and loyalty-driven profits for the service provider (Schloss-berg, 1990; Oliver *et al.*, 1997; Rust and Oliver, 2000). While this may also hold true for logistics services, very little is understood about the concept of customer delight in this type of business-to-business (B2B) engagement. Therefore, Deepen *et al.* (2008) call for the distinct examination of the performance-loyalty link based on a differentiation between goal achievement and goal exceedance. These two performance dimensions can be regarded as industrial proxies of customer satisfaction and customer delight in logistics outsourcing arrangements. While goal achievement refers to performance that meets *ex ante* agreed-upon outcomes, goal exceedance refers to services that significantly exceed the goals and expectations set forth in the outsourcing arrangement, providing a degree of pleasant surprise espoused in the consumer concept of delight. The question remains, though, whether this distinction between merely meeting the goals set forth in a logistics outsourcing arrangement and noticeably exceeding goals results in perceivable differences in customer loyalty. When goals are exceeded, is the business customer more likely to retain the services

of the provider, to extend the relationship to new and different services, and finally, to provide favorable referrals regarding its LSP? Thus, the objective of this research is to examine how goal achievement and goal exceedance influence these aspects of customer loyalty in the logistics outsourcing setting.

The performance-loyalty link is empirically investigated based on the German market, which is the largest economy and the largest logistics market in Europe and home to many of the world's leading LSPs (e.g. DHL, DB Schenker, and Hellmann Worldwide Logistics). As an additional contribution, the results from Europe are compared to those of the USA as one of the other major markets of the world, which also serves as a base for many leading LSPs (e.g. C.H. Robinson, Ryder, and UPS). In a business environment that is characterized by ongoing globalization, it is of great interest to determine whether a model is universally valid in two countries that are perceived to be largely similar, or even, as here, dedicated strategies are necessary.

The current paper is organized as follows. First, a conceptual model is developed that relates the two dimensions of logistics outsourcing performance (goal achievement and goal exceedance) to customer loyalty within the European and North American logistics markets. The paper continues by providing a description of research methods and a presentation of the results, followed by an extensive explanation of the differences between the two markets based on cultural theory. Finally, the managerial implications of the findings, limitations of the study, and directions for further research in this area are provided.

2. Theoretical background

2.1 Dimensions of logistics outsourcing performance

The few authors who have conducted research on logistics outsourcing performance acknowledge that its nature is complex and, therefore, requires sophisticated measurement (Stank *et al.*, 2003; Knemeyer and Murphy, 2004; Deepen *et al.*, 2008). This assertion is supported by the services research that reinforces the distinction between just meeting expectations, which results in satisfaction, and significantly exceeding them, which results in delight. While related to satisfaction, marketing research shows delight to be a distinct construct, which is not just a higher level of satisfaction (Oliver *et al.*, 1997; Rust and Oliver, 2000; Verma, 2003; Finn, 2005; and McNeilly and Barr, 2006). Delight provides boosted value to the customer caused by performance that is unexpected in its magnitude or the area to which it relates (Oliver *et al.*, 1997; Finn, 2005).

In order to incorporate this premise and to understand logistics outsourcing performance more thoroughly, the current research embraces the Deepen *et al.* (2008) multidimensional conceptualization of logistics outsourcing performance. Namely, this conceptualization distinguishes between the exceedance of the goals set prior to the outsourcing arrangement and performance that merely achieves expected outcomes as industrial proxies of customer satisfaction and customer delight in logistics outsourcing arrangements. While goal achievement refers to logistics outsourcing performance that achieves expected outcomes *ex ante* agreed upon by a company and its logistics service provider, goal exceedance refers to services that significantly exceed the goals and expectations set forth in the outsourcing arrangement, providing a degree of pleasant surprise espoused in the consumer concept of delight.

2.2 Dimensions of loyalty

As noted in Section 1, many business managers and researchers see a loyal base of customers to be among the company's most valuable assets, which has been validated by different studies. Kalwani and Narayandas (1995), for example, show that companies with elevated levels of customer loyalty exhibit higher revenues, higher returns on investment, and a higher profitability of innovations.

Despite the fact that customer loyalty has become a prevalent construct in marketing and other relationship-focused fields of business research, the measurement of customer loyalty still remains surprisingly nebulous. A review of recent empirical articles published in leading marketing journals shows that within both business-to-consumer (B2C) and B2B research, no standard for the measurement of customer loyalty has emerged (Yim *et al.*, 2008; Heitmann *et al.*, 2007; Palmatier *et al.*, 2007; Chandrashekar *et al.*, 2007). Although the multidimensional nature of customer loyalty has been acknowledged for years (Rundle-Thiele and Mackay, 2001; Söderlund, 2006), no consensus has been reached regarding the dimensions to be incorporated in its measurement. While a portion of extant studies focuses only on purchasing (Yim *et al.*, 2008; Baumgartner and Steenkamp, 2006; Cooil *et al.*, 2007), most also incorporate recommendations (Palmatier *et al.*, 2007; Johnson *et al.*, 2006; Vogel *et al.*, 2008; Raimondo *et al.*, 2008).

Homburg *et al.* (2003) go further to separate purchasing loyalty into two distinct behaviors: retention and extension. The former refers to renewing existing contracts after their expiration, while the latter is concerned with extending the scope of the relationship by providing additional new services to existing customers. The current research embraces this distinction and includes both purchasing dimensions and referrals. This provides a more thorough investigation of the unique effects that goal achievement and goal exceedance may exert on each aspect of loyalty across the two national settings of interest.

2.3 Conceptual model and research hypotheses

This research seeks to expand the existing knowledge and provide additional clarity with respect to the linkage between performance and loyalty by examining relationships between LSPs and their customers. In particular, the study differentiates distinct dimensions of performance on one hand and distinct dimensions of loyalty on the other. While there is little knowledge about these differentiated effects, existing research provides abundant support that service performance, in general, has a positive effect on customer loyalty.

Social exchange theory provides a relationship perspective on the linkage of performance to loyalty and has been the basis for many fundamental pieces on relationship management (Anderson and Narus, 1984; Dwyer *et al.*, 1987; Anderson and Narus, 1990; Morgan and Hunt, 1994; and Gundlach *et al.*, 1995). First, the theory states that relationships result in an outcome comprised of cost and utility, which is evaluated with respect to the individual's expectations (Lambe *et al.*, 2001). This corresponds to our conceptualization of logistics outsourcing performance. Second, an outcome that exceeds the expectations will result in a continued or extended relationship (Lambe *et al.*, 2001). This links the performance outcomes of the outsourcing relationship directly to our first two dimensions of customer loyalty – retention and extension. Additionally, in the context of social exchange and reciprocity,

referrals are another way in which stable and firm relationships manifest themselves. Though tested outside the logistics domain, prior research has demonstrated how supplier reliability yields positive affect in B2B settings resulting in favorable word-of-mouth communications and stronger patronage (Selnes and Gønhaug, 2000; Reinartz and Kumar, 2002). Increased service performance, which is the result of any combination of higher quality of services and lower costs imposed on the customer, are, thus, hypothesized to have a positive effect on customer loyalty – in all three of its dimensions (i.e. retention, extension, and referrals).

Various empirical studies in different B2C and B2B settings (Zeithaml *et al.*, 1996; Bloemer *et al.*, 1999; Cronin *et al.*, 2000; Wong and Sohal, 2003; Bell *et al.*, 2005) have focused on the quality of service and have shown that service quality positively affects loyalty. In the logistics context, Stank *et al.* (2003) show logistics service performance to have a positive impact on a customer's overall satisfaction and, consequently, on overall loyalty. Correspondingly, Cahill (2006) demonstrates that service quality in logistics has a positive impact on all three dimensions of loyalty, with the strongest effect on retention and the weakest on extension.

Hence, it can be asserted that higher levels of logistics outsourcing performance lead to increased customer loyalty:

- H1a.* Goal achievement has a positive effect on retention in logistics outsourcing relationships.
- H1b.* Goal achievement has a positive effect on extension in logistics outsourcing relationships.
- H1c.* Goal achievement has a positive effect on referrals in logistics outsourcing relationships.

Additionally, multiple studies show that improvement of service not only exerts a positive effect on loyalty until the customers' expectations are met, but even thereafter, when services exceed expectations (Teas and DeCarlo, 2004; Streukens and de Ruyter, 2004; Zeithaml *et al.*, 1996; Mittal *et al.*, 1998; Yap and Sweeney, 2007). Thus, it can be concluded that the exceedance of outsourcing goals also has a positive effect on all three dimensions of loyalty (Figure 1):

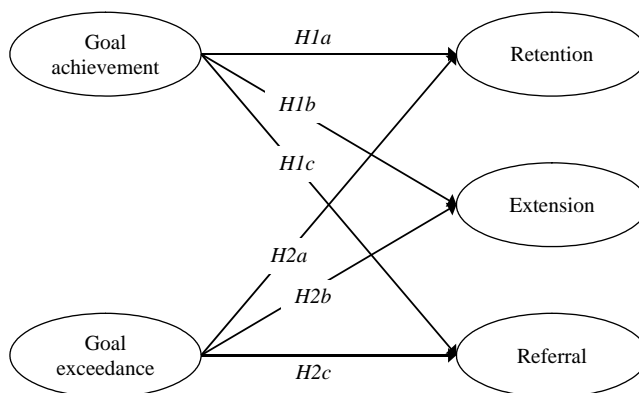


Figure 1.
Conceptual model

- H2a.* Goal exceedance has a positive effect on retention in logistics outsourcing relationships.
- H2b.* Goal exceedance has a positive effect on extension in logistics outsourcing relationships.
- H2c.* Goal exceedance has a positive effect on referrals in logistics outsourcing relationships.

While the extant literature provides evidence that performance has a positive effect on loyalty for all levels of performance, there is little knowledge regarding whether the loyalty effect of performance improvements is stronger at lower or higher levels of performance. While marketing literature on customer delight posits that unexpectedly good services offer the potential to strongly enhance customer loyalty and loyalty-driven profits for the service provider (Schlossberg, 1990; Oliver *et al.*, 1997; Rust and Oliver, 2000), empirical results in this field are mixed. Teas and DeCarlo (2004) and Streukens and de Ruyter (2004) do not identify any non-linear effects of service performance on customer loyalty in the fields of student counseling and retail services (dry cleaning, fast food restaurants, and supermarkets). In contrast, Zeithaml *et al.* (1996) detect differences in effect sizes below and above expectations for three of four analyzed industries (computer manufacturing, retail chain, and automobile insurer), without being able to establish a clear pattern. Yap and Sweeney (2007) show for the field of retail banking that performance changes above the level of expectations have a slightly stronger marginal effect on loyalty than when they occur at a level below expectations. In contrast, Mittal *et al.* (1998) identify a negative asymmetry in the healthcare industry, which means that negative deviations from the expected level of performance result in greater changes in loyalty than positive deviations. Such an effect can be attributed to prospect theory (Anderson and Mittal, 2000). Prospect theory suggests that performances that fall short of the expectations have a stronger impact on customer intentions and behavior than performances that exceed expectations (Kahneman and Tversky, 1979).

In the case of logistics outsourcing, risks stemming from retention and extension lie in the negative effects a poor service will cause to the customer (i.e. higher costs imposed and/or lower service levels achieved). Risks from referrals originate from the manager is damaging his reputation if the LSP he recommends does not perform as anticipated. Additionally, it might be assumed not only that sub-expectation performances are subject to more intense reactions, but that the effect or outcome of a negative performance deviation is actually bigger than that of positive deviations. This is expected with respect to the service level, as in this situation “sub-par” performances can dramatically affect highly integrated supply chains. Therefore, we propose:

- H3a.* The marginal effect of goal achievement on retention is greater than that of goal exceedance.
- H3b.* The marginal effect of goal achievement on extension is greater than that of goal exceedance.
- H3c.* The marginal effect of goal achievement on referrals is greater than that of goal exceedance.

While this study first tests the proposed hypotheses in the European region based on the German logistics market, it also strives to explore potential differences in comparison to the North American market based on results from the USA. While Germany and the USA are often perceived to be largely similar, Kaufmann and Carter (2006) emphasize that these two countries exhibit some distinct cultural traits. We will investigate whether these distinctions are sufficiently large to affect the formation of customer loyalty in logistics outsourcing relationships.

3. Research methodology

3.1 Sample design

The sample design needs to account for the research goal of analyzing the relationship between LSPs and their customers with regard to the linkage between logistics outsourcing performance and loyalty. For this reason, users of logistics services were targeted. More specifically, logistics and supply chain managers on the strategic business unit-level from manufacturing and trading industries were selected. The potential respondents were initially screened in terms of their use of logistics outsourcing. Those indicating usage of these services were then asked to answer the survey and refer their answers to their most important LSP relationship, thus, ensuring the necessary strategic relevance of the issue to the respondents and to the business unit.

Data were gathered from logistics and supply chain professionals. In Germany, they were members of the German Logistics Association; in the USA, they were members of the Council of Supply Chain Management Professionals. From those two databases all members with available e-mail addresses employed in the manufacturing, distribution, and retailer industries were selected. A web-based survey method was employed in a manner consistent with guidelines set forth by Griffis *et al.* (2003). Sample members were contacted via e-mail and asked to complete the survey instrument via the internet. Following the recommendations of Larson and Poist (2004), incentives and friendly reminder e-mails were used to increase response rate. While the German sample was presented with a questionnaire in German, the US sample was provided with an English language questionnaire.

The sample included 2,789 potential respondents in Germany and 1,448 in the USA. In the following information USA figures are given in parentheses. Of those, 345 (263) questionnaires were completed, corresponding to a response rate of 12.4 percent (18.2 percent). A total of 27 (18) cases had to be excluded from the analyses due to a large number of missing values or obvious random answering, resulting in 318 (245) usable cases giving us a total of 563 cases for the analyses. It should be noted that all respondents had experience with logistics outsourcing. Respondent information on industry affiliation and size (measured in revenue) is shown in Tables I and II. An analysis of the demographics suggests that the sample is well balanced with regard to industry affiliation, while large companies are slightly over-represented. At the macro-level, the logistics services rendered in the most important LSP relationship are very comparable between Germany and the USA. On average, the share in total logistics outsourcing volume is 46 percent in Germany and 45 percent in the USA, in both countries the types of services employed are similar and both samples indicated a focus on outbound logistics activities. Also, the relationships have a duration of slightly over seven years in the German sample and a little below six years in the US sample. As suggested by Kumar *et al.* (1993), respondent competency was assessed on

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Table I.
Sample description
for Germany

| | Percentage |
|-------------------------------------|------------|
| <i>Industry</i> | |
| Food and beverage | 5.7 |
| Automotive | 16.7 |
| Consumer goods | 8.8 |
| Industrial equipment | 9.7 |
| Electronics and related instruments | 14.8 |
| Chemicals and plastics | 10.4 |
| Retailing | 13.5 |
| Healthcare | 5.7 |
| Others | 14.7 |
| <i>Annual revenue in millions €</i> | |
| <100 | 20.7 |
| 100-249 | 15.4 |
| 250-499 | 18.6 |
| 500-999 | 12.6 |
| ≥ 1,000 | 28.6 |
| No response | 4.1 |

Table II.
Sample description
for the USA

| | Percentage |
|--|------------|
| <i>Industry</i> | |
| Food and beverage | 16.5 |
| Automotive | 4.8 |
| Consumer goods | 16.5 |
| Industrial equipment | 5.2 |
| Electronics and related instruments | 11.3 |
| Chemicals and plastics | 10.9 |
| Retailing | 9.7 |
| Healthcare | 10.1 |
| Others | 14.9 |
| <i>Annual revenue in millions US\$</i> | |
| <100 | 6.4 |
| 100-249 | 10.5 |
| 250-499 | 11.7 |
| 500-999 | 10.1 |
| 1,000-4,999 | 29.0 |
| ≥ 5,000 | 30.2 |
| No response | 2.0 |

the basis of personal information provided by the respondents. Since over 90 percent of respondents indicated that they were at the logistics manager level or higher, uninformed response bias does not seem to be an issue in the study.

3.2 Measurement model assessment

The measurement scales we used are multi-item seven-point Likert-type scales derived from the logistics and marketing literature and are displayed in Appendix 1. Face validity of the measurement items was assessed by conducting pretest interviews

with twelve academics and ten practitioners familiar with logistics outsourcing relationships.

The retention and extension scales used here are based on works by Homburg and Giering (2001), Homburg *et al.* (2003), and Cahill (2006). For retention, indicators measure customers' attitudes towards their most important LSP with regard to repeat purchasing intentions of the same service. For extension, the scale captures customers' intentions towards buying additional services from the focal LSP. The scale for referrals is based on Price and Arnould (1999), Babin *et al.* (2005), and Cahill (2006) and captures the frequency with which an LSP is recommended, to both individuals in- and outside the firm. Goal achievement and goal exceedance were measured using the Deepen *et al.* (2008) scales, where goal achievement refers to the degree the goals of the logistics outsourcing arrangements, with respect to cost and quality, have been met, while goal exceedance reflects the extent to which the LSP significantly exceeds the expectations and the performance goals set by the customer prior to commencing the outsourcing arrangement.

Subsequently, the measurement models were tested by conducting a confirmatory factor analysis using AMOS 5.0 to assess the convergent and discriminant validity of the constructs measured as latent variables. The overall fit measures indicate good fit for the measurement models in both samples (Appendix 2). The measure of $\chi^2/\text{degrees of freedom}$ of 2.570 for Germany and 2.558 for the USA is very satisfactory under conventional standards (Carmines and McIver, 1981; Wisner, 2003). In order to provide further information on model adaptation, additional fit criteria were calculated for the model. All measures meet the established criteria and indicate satisfactory model fit.

In addition, all factor loadings are significant at the 0.001 level, supporting convergent validity for the constructs (Anderson *et al.*, 1987; Bagozzi *et al.*, 1991). Further, according to Bagozzi and Yi (1988), the average extracted variance (AVE) of a construct should be higher than 0.50, which also is fulfilled in all instances.

Discriminant validity, which refers to the degree to which measurements of different concepts are distinct (Bagozzi, 1980), was examined using the Fornell and Larcker (1981) criterion. The squared correlations between constructs are below the respective constructs' AVE – indicating discriminant validity – for all constructs in both samples.

3.3 Results

The fit statistics for the German sample are satisfactory: normed χ^2 is 2.853; comparative fit index (CFI) = 0.951; Tucker-Lewis index (TLI) = 0.938; root mean square error of approximation (RMSEA) = 0.076; and standardized root mean square residual (SRMR) = 0.080. Given sound assessment of the overall model fit, attention can turn to the model's parameter estimates.

Hypothesis test results for this base model are also displayed in Table III. The *H1a-H1c* examine the direct influences that goal achievement exerts on the three dimensions of customer loyalty. Model results indicate support only for two of the three hypotheses. The effects on retention (0.59, $p < 0.001$) and referrals (0.19, $p < 0.01$) are both positive and highly significant, while the effect on extension is not significant, not even at $p < 0.10$. This result leads us to reject *H1b*, while *H1a* and *H1c* receive support.

The *H2a-H2c* that refer to the positive influence of goal exceedance on all three dimensions of customer loyalty find strong support. The effects on retention

Table III.
Hypotheses test results

| Path | Standardized path coefficients | | |
|---|--------------------------------|-----------|--|
| | Germany | The USA | Significance of differences between countries (<i>H3a-H3c</i>) |
| <i>H1a</i> : goal achievement – retention | 0.59*** | 0.30*** | $p < 0.001$ |
| <i>H1b</i> : goal achievement – extension | –0.05 (ns) | 0.12 (ns) | ns |
| <i>H1c</i> : goal achievement – referrals | 0.19** | 0.16* | ns |
| <i>H2a</i> : goal exceedance – retention | 0.18** | 0.57*** | $p < 0.01$ |
| <i>H2b</i> : goal exceedance – extension | 0.55*** | 0.55*** | ns |
| <i>H2c</i> : goal exceedance – referrals | 0.48*** | 0.66*** | ns |

Notes: Significance at: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$; ns, non-significant at: $p < 0.1$

(0.18, $p < 0.01$), extension (0.55, $p < 0.001$), and referrals (0.48, $p < 0.001$) are all positive and significant. These results suggest that both goal achievement and goal exceedance are strong drivers of customer loyalty.

When the effects of goal achievement and exceedance are combined they produce an R^2 value of 48.3 percent for retention, 27.7 percent for extension, and 35.1 percent for referrals. This indicates that logistics outsourcing performance appears to be a very strong predictor of customer loyalty, given the very substantial amount of variance explained.

H3a-H3c suggest that the marginal effect of goal achievement is stronger on all three dimensions of loyalty as compared to the marginal effects of goal exceedance. This proposition, however, finds empirical support only in one out of three cases. Tested via χ^2 difference test, the effect of goal achievement (0.59) on retention is significantly larger ($p < 0.001$) than the effect of goal exceedance on retention (0.18), which means that the marginal effect of service performance on retention decreases. Yet the effects of goal achievement on extension (–0.05) and referrals (0.19) are significantly weaker ($p < 0.001$ for extension and $p < 0.01$ for referrals) than the effects of goal exceedance, with values of 0.55 and 0.48, respectively. Thus, the marginal effect of service performance increases for these two loyalty dimensions at higher levels of performance.

In the next step, the results from Germany were compared to those of the USA. To determine the significance of potential differences, we used multi-group analyses. Invariance of structural paths was tested following the procedure proposed by Zimmer-Gembeck *et al.* (2005). In the first step, a free model, in which all parameters were estimated separately for the two samples under scrutiny, was compared to a model in which structural paths were constrained to be equal in both samples. If the χ^2 statistic was significantly worse for the restricted model, we expected differences with regard to the structural paths and conducted further analyses. If the χ^2 statistic was not significantly different, we assumed sample invariance with regard to structural paths. Where differences were found, we examined each of the structural paths individually to pinpoint the location of the difference(s) between the two samples (Thelen and Honeycutt, 2004). For that, structural paths were restricted to equality one by one. If a restriction was found to cause a significant increase in the χ^2 , the respective path was diagnosed to be significantly different.

In the USA, the corresponding structural model also shows satisfactory fit: normed $\chi^2 = 2.889$; CFI = 0.952; TLI = 0.939; RMSEA = 0.088; and SRMR = 0.084.

The results of the structural model, again, support all hypotheses except *H1b* (Table III). Yet a somewhat different pattern of effects appears in the USA compared to the one in Germany. Tested via χ^2 difference tests, the paths show to be different overall ($\Delta\chi^2 = 25.68$; $\Delta df = 6$; $p < 0.001$). This difference is caused by two paths that are significantly different on the individual level: the paths of goal achievement and goal exceedance on retention. In the USA, the effect of goal achievement on retention is much smaller and the effect of goal exceedance on retention much larger than in Germany. The interpretation of this result is that in the USA, the effect of goal exceedance on customer loyalty is significantly larger than that of goal achievement for all three loyalty dimensions (retention with $p < 0.05$; extension with $p < 0.01$; and referrals with $p < 0.001$). Additionally, the R^2 values are higher in the USA at 64.3 percent for retention, 39.3 percent for extension, and 60.2 percent for referrals. Thus, it can be concluded that the perceived level of performance is of higher importance for loyalty in the USA than in Germany.

4. Discussion

From the LSP perspective, the findings are noteworthy because they raise important issues to consider, namely whether or not dedicating resources to the development of strategies that will lead to exceeding customer expectations is in their best interest. While delighting customers might seem to be the best approach for building loyalty in their relationship, there are other issues to consider. Exceeding customer expectations may lead to levels of performance that are increasingly more difficult to achieve in the future (Rust and Oliver, 2000). Exceeding performance goals may ultimately raise the level of customer expectations to the point where merely achieving goals is unattainable (McNeilly and Barr, 2006). In addition, LSPs may need to consider which accounts justify the effort and associated costs to exceed goals. These decisions to focus efforts on goal exceedance for certain accounts should be based on the potential value of the account, combined with an assessment of the LSP's own capabilities to exceed customer expectations effectively.

The results generated through this study are relevant for the marketing of logistics services but also more generally for the marketing of services with comparable character, such as information technologies services, which is another people-driven business that is perceptions based and not as focused on the fixed attribute characteristics of the involved products. The results extend the existing understanding of the service performance-customer loyalty relation by not only differentiating three dimensions of customer loyalty (i.e. retention, extension, and referrals), but also distinguishing different levels of performance (i.e. goal achievement and goal exceedance) regarding their respective influence on loyalty.

The study supports the belief that performance is an important lever to generate loyalty (see the results regarding *H1* and *H2*). Accordingly, performance should hold a central role within the management of customer relationships. However, the differentiated results concerning the effect of performance on loyalty below and above the goals and expectations of the customer extend the existing assumptions. Working towards meeting the goals and expectations of customers will generate a benefit to LSPs; exceeding them is also beneficial as this increases loyalty even further. Thus, goal exceedance offers value to the LSP, even if many managers question the

willingness of customers to reward extraordinary performance – which may only prevail in the short term.

In Germany, with regards to contract renewals, i.e. retention, performance that falls short of expectations leads to stronger customer reactions than does performance that exceeds expectations. In combination with the knowledge that customer retention in Germany, on average, is rather high with logistics services (Weber and Wallenburg, 2004), the following interpretation is suggested: the probability of a contract renewal is already high when the goals and expectations of the customers are just met. One reason for this may be the aversion of the German buyers to risk a change of the service provider and, thus, a potential shortfall in the service level even though the current service delivery is merely sufficient (Hofstede, 2001). Hence, there is only limited potential to increase the already high likelihood of contract renewal further. Consequently, any further increase in performance – the exceedance of the initial goals – can only yield a comparatively small additional retention effect. Conversely, when performance drops below customer expectations, the retention rate is significantly reduced ($p < 0.001$). Possibly due to the potentially severe consequences for the companies' value creation processes, the LSP customers react strongly to sub-par performance – the effect sizes are correspondingly large in this performance range. This is in line with the findings of Wilding and Juriado (2004) who find that service failures and quality issues are the main reasons for not renewing expiring contracts.

When comparing these results from Germany to those of the USA, significant differences can be observed. This may seem surprising, as it is generally believed that the two countries are largely similar with regard to business culture. In fact, results of Hofstede's (2001) seminal study of cross-cultural differences show that Germany and the USA are very similar on three of the five measured dimensions, i.e. power distance (German score: 35; US score: 40; average score: 57), masculinity vs femininity (German score: 66; US score: 62; average score: 49), and short- vs long-term orientation (German score: 31; US score: 29; average score: 46). On the other hand, the results for uncertainty avoidance (German score: 65; US score: 46; average score: 56) and individualism vs collectivism (German score: 67; US score: 91; average score: 43), suggest that some decisive distinctions between German and American cultures do exist that help us explain the identified differences. Culture in this respect can be defined as the collective programming of the mind that distinguishes the members of one national culture from another, i.e. "that component of our mental programming which we share with more of our compatriots as opposed to most other world citizens" (Hofstede, 1989, p. 193). We will, therefore, draw upon different cross-cultural studies that have researched the cultural values, norms, routines, and customs in the two countries as proxies for national culture (Kluckhohn and Strodtbeck, 1960; Hall, 1976; Hofstede, 1980; Goodenough, 1981; D'Andrade, 1984; Hall and Hall, 1990; McCort and Malhotra, 1993; Trompenaars and Hampden-Turner, 1997; Hofstede, 2001). The applicability of Hofstede's framework to the context of buyer-seller relationships has been confirmed by a number of authors (Pressey and Selassie, 2003) and if used with caution and reasoning, cultural theory and agent studies can provide a useful basis for the explanation of distinctions found in different cultural contexts.

The first main distinction we find is that in the USA, goal exceedance is critical to creating retention, while in Germany it is sufficient to achieve pre-set goals and meet service level agreements. In relevant cross-cultural comparisons, we find various

indications that this may be an expression of the particular differences in culture between the USA and Germany. As mentioned above, Hofstede (2001) in his seminal study points out that Germans are highly uncertainty-avoidant, while Americans embrace uncertainty as a requirement for creative change and innovation. Thus, Germans can be expected to generally dread change such as that which results from ending a relationship with an established LSP. As long as possibly justifiable, Germans will continue a relationship – and an objective justification can be assumed to exist for this as long as the goals and service levels agreed between the customer and LSP when entering into the relationship are achieved. This is reflected in the fact that the levels for retention are significantly higher ($p < 0.001$) in Germany than in the USA. Exceeding these goals, on the other hand, should not further increase retention.

A second characteristic particular to Germans is their strict adherence to rules and regulations. Hofstede (2001) shows that highly uncertainty-avoidant cultures such that in Germany exhibit a high need for rules and laws and try to formalize procedures for every contingency. Less uncertainty-avoidant cultures like the USA, on the contrary, have a smaller need for laws and rules. Similarly, highly uncertainty-avoidant countries observe rules more strictly and oppose any changes, while the view prevails in less uncertainty-avoidant countries that rules should be changed if they no longer seem adequate (Hofstede, 2001). In this respect, *ex ante* specified service level expectations can be seen as rules that govern the relationship with an LSP and by which the business success of the relationship can be assessed. As long as these specified requirements are adhered to, there is no reason for a German to switch to a different LSP. Americans, on the other hand, do not possess the same fixation on rules, and they can, therefore, be expected to be delighted and motivated by an LSP that exceeds expectations.

A third factor that may explain why it is sufficient for an LSP in Germany to achieve goals rather than to exceed them in order to create retention is the fact that Germans, in general, place a higher emphasis on stable relationships and are more loyal to existing business partners than Americans are (Hall and Hall, 1990; Trompenaars and Hampden-Turner, 1997). Indeed, Hofstede (2001) points out that stable relationships predominate in highly uncertainty-avoidant cultures, while less uncertainty-avoidant cultures are characterized by a higher willingness to terminate relationships and to immerse in new ones.

Relationship extension, however, differs decisively from retention. Here, in both countries the effects of falling short of expectations are much smaller than the corresponding effects of exceeding expectations. As extensions of the service delivery are rather rare on average (Weber and Wallen-burg, 2004), the following explanation can be suggested: as extension rates have a lower bound of 0, they cannot drop much further even if performance is below expectations. Only with superior performance that exceeds expectations does the extension rate increase substantially. One explanation for this lies in the fact that the demand for logistics services is a derived demand that – at least in the short-term – is dependent on the company's production and sales. Thus, relationship extensions normally require the LSP to replace the party that is currently performing the services. Regardless of who this is – another LSP or the customer itself – this requires a significantly superior performance to compensate for the risks inherent in any provider changeover. Otherwise the customer is unlikely to take the corresponding decision due to the inherent risk premiums and switching costs. This logic would appear to hold in various settings, including Germany and the USA.

The case of referrals is similar to that of extension in the sense that also here the effect of service performance is stronger above the customer expectation level than below. Yet other than with extension, even below the customer expectations a significant effect is observable. Here, too the cross-national effects are similar. Managers in both settings appear ready to offer favorable word-of-mouth to both those within and beyond the company when service meets expectations, and even more so when delighted by the service rendered by the provider.

Looking at the overall model results, a further major difference between Germany and the USA can be observed. Examining the R^2 -values for our three dimensions of loyalty shows that performance in itself is more important for fostering loyalty in the USA than in Germany – in all instances the R^2 is substantially higher in the USA. It must, therefore, be assumed that factors other than performance have strong, loyalty-fostering effects in Germany. This is reinforced by cross-cultural research that shows that Americans, in general, are more results-oriented and place a much higher emphasis on results than Germans do. Americans “do business where they ‘get the best deal’” (Hall and Hall, 1990, p. 153), and it is important to “win your objective” (Trompenaars and Hampden-Turner, 1997, p. 155), while Germans “are not preoccupied with immediate results” (Hall and Hall, 1990, p. 37). It is clear, then, that performance should have the decisive effect on loyalty in the USA that is shown in our study, while other factors outside performance strongly influence German businesses in their appraisal of relationship quality. For example, Germans seek consensus and try to avoid any type of conflict, including the friction that would occur in the case of relationship termination (Hofstede, 2001). In fact, Germans were found to attribute higher value than Americans to interpersonal relationships in the business world with the feeling of “mutual obligations of protection in exchange for loyalty” (Hofstede, 2001, p. 237). Factors outside the realm of performance, such as personal bonding (Williams *et al.*, 1998) and factors that mitigate uncertainty (e.g. commitment and trust) (Morris *et al.*, 1999; Gounaris, 2005) should therefore be important determinants of loyalty in Germany.

5. Managerial implications

The study supports the belief that performance is an important lever to generate customer loyalty. To begin with, improving performance is not detrimental to any of the three dimensions of customer loyalty as retention, extension, and referrals are positively affected. Yet the results indicate that the answer to the initial question (i.e. whether it is sufficient to just meet customer expectations or whether exceeding them is sensible) depends on the strategies and objectives of the LSP. This is rooted in the very different effects observed for retention, on the one hand, and extension and referrals on the other hand in the focal German sample: while the effects of service performance for retention decrease once the customer expectations are exceeded, the effects for extension and retention actually increase from this point on.

If the objective for an LSP primarily lies in “just” retaining a customer in order to maintain the existing sales volume, the LSP should focus on achieving the goals and expectations of the existing customers. Typical cases for this are all customers where any extension of the relationship is very unlikely, whether because the LSP has already accomplished a very high share of wallet, because the LSP does not offer the other services outsourced by the customer, or because the customer does not want to extend

its logistics outsourcing due to operational or strategic reasons. With these customers, delighting them by exceeding the expectations would yield little or no benefit for the LSP as retention rates cannot be increased much further. In addition, the danger exists of inflating customer expectations by “raising the bar” (Rust and Oliver, 2000). Thus, goal exceedance is only a sensible strategy when it does not impose any or only little additional cost. Exceptions could include key customers that are important to the LSP for strategic reasons. Also, expectation management should be employed in order to control expectations that cannot be fulfilled later on and risk lower retention rates.

In contrast, in order to realize cross-selling potential, substantially better performance that exceeds the initial goals and expectations of the respective customer is necessary and sensible. Such an objective usually exists at growing LSPs that aim at increasing their revenues and with customers that offer significant potential to increase their logistics outsourcing volume. An LSP that provides service that only exceeds the expectations a little risks being “stuck in the middle” in this situation, as extension would require better services that substantially exceed expectations, while retention could be achieved with less costly services that merely meet expectations. The same is the case with referrals. Here, exceeding the goals and expectations is necessary if the LSP wants to profit from referrals.

Rust and Oliver (2000) also emphasize that exceeding expectations may increase competition and even induce an “arms race” between different providers that only benefits the customers and not the competing providers, as profits erode because prices cannot be raised at a rate commensurate with performance. This mechanism can be utilized by an LSP with strong resources when trying to push competitors out of the market. Other LSPs should concentrate their performance improvements on areas that cannot easily be matched by competitors.

Our results also show that different decision-making processes and patterns have to be considered when doing business in different regions of the world. In this study, we compared Germany and the USA. In both countries, goal achievement is a prerequisite for the creation of retention. In the USA, LSPs can largely increase the likelihood of maintaining existing customer relationships by exceeding these goals. In Germany, on the contrary, outperforming goals has a very limited effect on retention, and managers should be careful not to waste resources. If, on the other hand, managers at LSPs intend to generate new business with existing customers (extension) or foster positive word-of-mouth (referrals), exceedance of goals is crucial in both countries. In addition, managers should be aware that performance has a much greater effect on loyalty in the USA than in Germany, where factors outside the realm of performance, such as the quality of personal relationships, appear to be critical for the creation of loyalty. Thus, German LSPs intending to penetrate the US market must be aware that merely meeting expectations is not even sufficient for creating retention, but that they can positively differentiate themselves by outperforming. On the other hand, the USA LSPs accustomed to an atmosphere of “the more, the better” must know that in Germany, it is perfectly adequate to meet agreed upon service levels in order to foster retention.

Overall, managers may be surprised to find such distinct results for countries that are generally perceived to be rather similar. In his seminal cross-cultural study, Hofstede (2001) points out that the UK, Canada, New Zealand, Australia, and The Netherlands share many of the American cultural traits, while Austria,

Switzerland, and Finland are similar to Germany. Therefore, many of the conclusions derived for Germany and the USA are likely also to apply to these countries. On the other hand, managers should assume differences to be even bigger between cultures that exhibit greater differences than Germany and the USA, such as most Latin American and many Asian countries (e.g. Japan and South Korea). While the operations of LSPs grow and extend across the globe at an increased pace, people often fail to adapt as quickly. This can be especially dangerous and problematic in the highly decentralized and dispersed logistics service industry, where one "customer" corresponds to multiple contacts across the world. One key challenge that, therefore, needs to be addressed is how the standardization of views towards goal achievement and exceedance can be reconciled with the need to adapt to local cultural peculiarities. A last implication lies in being cautious about generalizing findings from a specific setting and using them as the basis for decision making under different conditions. This relates both to the transfer of knowledge within LSPs, where success factors may vary strongly between regions, and the transfer of findings from research to practice.

6. Limitations and future research

As with any study, it is important to consider the current study's limitations. First, the research is limited to outsourcing of logistics services. It may also be promising to apply our model to other services in the field of business process outsourcing that are relevant to the management of supply chains to detect similarities and differences.

The literature on logistics outsourcing provides a multitude of perspectives in the depiction of typical strategic and tactical activities (Coyle *et al.*, 2003; Knemeyer and Murphy, 2005). Within this study, we focused on outsourcing relationships between companies and LSPs, which, compared with basic logistics services, encompass a broader number of service functions and are characterized by a long-term orientation. By doing so, we exclude all logistics services that are rendered on a short-term, transactional basis and are rather narrow in scope. These transactional services are often lower in specificity, uncertainty, and risk, and, according to transaction cost theory, require a lower degree of cooperation. Future research should, therefore, also examine these services, as it can be anticipated that the relationship between performance and loyalty may differ between transactional and relational settings. Further, we did not assess channel position of the LSP users. As service expectations and changes in service requirements may vary along a supply chain, so may the individual influences of the two outsourcing performance dimensions on loyalty. We, therefore, encourage corresponding future research that considers this issue.

The examination of other potential moderators might prove as consequential as the construct of culture. While potential moderators are countless, it may be useful to examine those that can be expected to describe the business environment of the companies involved or the dynamics of the interpersonal relationships that determine loyalty and its antecedents. In this respect, promising moderators include organizational characteristics as well as the scope and duration of outsourcing relationships. The current research sheds light on a focal aspect (i.e. national setting and culture) that resides in several business relationships but can be fully expected to be increasingly relevant in the prevailing globalized markets. In order to be able to examine distinct aspects of culture and its influences on business relationships through

(quantitative) moderation analyses, future studies could operationalize culture along the five dimensions established by Hofstede (2001).

Finally, it is important to note that the current study only focuses on the USA and Germany and contrasts relationships within those two cultural settings. We, therefore, can only draw conclusions for these two countries. Yet as the cultural differences of Germany and the USA are relatively small compared to other pairs of countries (Kaufmann and Carter, 2006), it is very likely that differences in the formation of relationships are even bigger between other countries. This offers promising opportunities for future research, especially with regard to the developing regions that currently grow in international importance at a fast pace. Further, the somewhat weaker evaluations of model fit associated with the US sample allude to the need to capture additional factors that can influence the linkage between logistics outsourcing performance and loyalty behaviors in distinct settings.

7. Conclusions

This research sought to expand our understanding of outsourced logistics relationships on multiple fronts. Namely, we examine:

- the effects of goal achievement and goal exceedance on different aspects of customer loyalty; and
- the cultural influence that might be exerted on the nature of these relationships across two national settings.

In regard to the first focus, we found goal achievement to demonstrate a strong influence on the loyalty aspects of retention and referrals, but not on extension. Meanwhile, all three dimensions of loyalty were discovered to be influenced by the delighted state of customers when the goals of the outsourcing arrangement were exceeded by the logistics provider. Further, goal achievement was found to have a stronger effect on retention only, with goal exceedance demonstrating a stronger influence on extension and referrals.

In regard to the cross-national comparison, we found the German results to match those provided by the combined dataset. The US sample, however, showed a more demonstrative influence of goal exceedance on the loyalty dimensions, suggesting that American managers place greater emphasis on the service provider's performance than do their German counterparts when determining whether to enact loyalty behaviors.

These results find relevance among managers and researchers of logistics outsourcing. LSPs gain understanding of the distinct benefits that may be accrued by innovating in ways that lead the user to perceive higher degrees of performance in the outsourcing arrangement. As noted, this finding proved most substantial in the US setting, where customers placed more value on the exceedance of goals. Logistics managers can, in turn, use these findings to encourage the service provider to innovate in meaningful ways for the customer. Academics, meanwhile, are provided with further empirical support of the linkage between performance and loyalty in B2B service arrangements. The close examination of the two dimensions of outsourcing performance on three aspects of loyalty behavior builds on the extant literature. The examination across the two national settings provides yet another contribution of the study.

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Appendix 1

| | Germany Avg/SD | USA Avg/SD |
|--|-------------------|---------------|
| <i>Goal achievement</i> | | |
| Our LSP completely fulfills the goals and expectations we jointly set prior to this logistics outsourcing relationship | 5.40/1.12 | 5.01/1.36 |
| This LSP delivers its service always with the required quality | 5.49/1.09 | 4.93/1.33 |
| This LSP delivers its service always in the required time | 5.56/1.12 | 4.96/1.21 |
| Our logistics costs have been reduced by outsourcing to this LSP to the degree we expected it | 4.98/1.40 | 4.64/1.48 |
| <i>Goal Exceedance</i> | | |
| The goals and expectations we jointly set prior to the logistics relationship were substantially exceeded | 4.14/1.26 | 4.31/1.33 |
| We are significantly more satisfied with the quality of the LSP services than we expected | 4.06/1.31 | 4.24/1.34 |
| The relationship between actual costs for this project and the overall service performance is much better than expected | 3.53/1.33 | 4.12/1.39 |
| <i>Retention</i> | | |
| We will continue using this LSP in the future | 5.68/1.27 | 5.30/1.48 |
| Right now, we intend to extend existing contracts with this LSP when they expire | 5.48/1.44 | 5.04/1.60 |
| If we knew then what we know now, we would again select this LSP | 5.61/1.44 | 4.96/1.69 |
| <i>Extension</i> | | |
| In the future, the LSP will have a higher share of our logistics volume | 4.07/1.64 | 4.51/1.53 |
| When we bid out other services than the ones we outsource today, we will consider this LSP preferentially | 4.41/1.68 | 4.56/1.54 |
| In the future, we will use this LSP more than we do now | 3.98/1.59 | 4.02/1.77 |
| <i>Referrals</i> | | |
| I often mention this LSP to my co-workers in a positive way | 4.58/1.59 | 4.71/1.63 |
| I often recommend this LSP to persons outside my company | 4.31/1.76 | 4.68/1.61 |
| We often recommend this LSP | 4.29/1.69 | 4.51/1.53 |
| Notes: All items are measured with a seven-point Likert-scale, where 1 = strongly disagree, 7 = strongly agree; LSP, logistics service provider | | |

Logistics
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Table A1.
Measurement items

Table AII.
Fit statistics for the
measurement models

| | Germany | The USA |
|-------------------------|-------------|-------------|
| χ^2 Statistic (df) | 241.55 (94) | 240.44 (94) |
| Normed χ^2 | 2.570 | 2.558 |
| CFI | 0.959 | 0.961 |
| TLI | 0.947 | 0.950 |
| RMSEA | 0.070 | 0.080 |
| SRMR | 0.062 | 0.070 |

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